PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY	PCT						
To: MAIWALD PATENTANWALTS GMBH Attn. Kopf, Korbinian Elisenhof Elisenstrasse 80335 Müncher GERMANY To: MAIWALD Patentanwalts GmbH	NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION						
25. Juni 2004	(PCT Rule 44.1)						
MONCHEN	Date of mailing (day/month/year) 25/06/2004						
Applicant's or agent's file reference 25.0%.	FOR FURTHER ACTION See paragraphs 1 and 4 below						
International application No. PCT/EP2004/003308	International filing date (day/month/year) 29/03/2004						
Applicant AIRBUS DEUTSCHLAND GMBH							
1. X The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith. Filling of amendments and statement under Article 19: The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46): When? The time limit for filling such amendments is normally? months from the date of transmittal of the International Search Report; however, for more details, see see the notes on the accompanying sheet. Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Fascimile No.: (41–22) 740.14.35 For more detailed instructions, see the notes on the accompanying sheet. 2. The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith. 3. With regard to the protest against payment of (an) additional fee(e) under Rule 40.2, the applicant is notified that: the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant of the texts of both the protest and the decision thereon to the designated Offices. no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made. 4. Reminders Shortly after the expiration of 18 months from the priority date, the international application will be published by the international Bureau. If the applicant wishes to evoid or postone publication, a notice of withdrawal of the International application, or of the priority claim, must reach the International publication. The applicant may submit comments on an informal basis on the written opinion of the international Publica of 30 months from the priority date, the international Bureau as provided in Rules 90bis.1 rand 90bis.3, respectively, before the							
Name and mailing address of the International Searching Authority European Patent Office, P.B. 5818 Patentiaan 2 NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Maryannick Le Nadan						

Form PCT/ISA/220 (January 2004)

(See notes on accompanying sheet)

NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

in these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international phylication. Furthermore, it should be emphasized that provisional protection is available in some States only.

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Fluie 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been his filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

Notes to Form PCT/ISA/220 (first sheet) (January 1994)

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

- [Where originally there were 48 claims and after amendment of some claims there are 51]:
 "Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers;
 claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
- [Where originally there were 15 claims and after amendment of all claims there are 11]:
 "Claims 1 to 15 replaced by amended claims 1 to 11."
- [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
 "Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or "Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
- 4. [Where various kinds of amendments are made]: "Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international appplication is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	FOR FURTHER		see Form PCT/ISA/220		
A 7460 / KK	ACTION	as well a	as, where applicable, Item 5 below.		
International application No.	International filing date (day/mont	'vyear)	(Earliest) Priority Date (day/month/year)		
PCT/EP2004/003308	29/03/2004	<u>. </u>	28/03/2003		
Applicant	• **				
AIRBUS DEUTSCHLAND GMBH					
This International Search Report has been according to Article 18. A copy is being tra	n prepared by this international Sea unsmitted to the International Burea	rching Autho	ority and is transmitted to the applicant		
This international Search Report consists		eets.			
	a copy of each prior art document of	ited in this r	report.		
1. Basis of the report					
a With regard to the language, the i	international search was carried ou ess otherwise Indicated under this I	on the basi em.	is of the international application in the		
The international of this Authority (Rul		of a transla	ation of the international application furnished to		
•		disclosed l	in the international application, see Box No. I.		
2. Certain claims were four	nd unsearchable (See Box II).				
3. Unity of invention is lact	king (see Box III).		·		
4. With regard to the title,					
X the text is approved as su					
the text has been establis	shed by this Authority to read as followed	ows:			
	•				
P AARM					
5. With regard to the abstract,	ibmitted by the englisher	,			
the text has been establis	ubmitted by the applicant. shed, according to Rule 38.2(b), by	his Authorit	ty as it appears in Box No. IV. The applicant		
may, within one month fro	om the date of mailing of this interna	ntional searc	ch report, submit comments to this Authority.		
6. With regards to the drawings,			•		
a. the figure of the drawings to be p	published with the abstract is Figure	No1	·		
X as suggested by					
	is Authority, because the applicant				
	is Authority, because this figure bet	ter characte	rizes the invention.		
b. none of the figures is to b	be published with the abstract.		•		
					

Form PCT/ISA/210 (first sheet) (January 2004)

International application No.

INTERNATIONAL SEARCH REPORT

PCT/EP2004/003308

Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

According to an exemplary embodiment of the present invention, a frame member for an aircraft is provided comprising a clip region (4) and a frame region (6). According to an aspect of this exemplary embodiment of the present invention, the clip region (4), shear web region (16) and the frame region (6) are integrated into the frame member and be formed from an extrusion mold by a milling process. Advantageously, this allows for a reduced number of individual elements for forming a frame member and provides the flexibility of variation of the forms and dimensions of a frame member for an aircraft.

Form PCT/ISA/210 (continuation of first sheet (3)) (January 2004)

INTERNATIONAL SEARCH REPORT

international Application No PCT/EP2004/003308

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 B64C1/06 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 **B64C** Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data C. DOCUMENTS CONSIDERED TO BE RELEVANT Relevant to claim No. Citation of document, with indication, where appropriate, of the relevant passages US 5 518 208 A (ROSEBURG LAWRENCE E) 1,2,7-9 X 21 May 1996 (1996-05-21) 3-5 column 3, line 22 -column 6, line 60; figures 3,4 US 2001/015043 A1 (ZINK WALTER ET AL) Y 23 August 2001 (2001-08-23) paragraph '0036!; figures Y US 1 851 211 A (RAGSDALE EARL J W) 29 March 1932 (1932-03-29) page 1, line 84-87; figure 1 DE 35 31 028 A (VELDEN ALEXANDER JACOBUS Y MARIA) 5 March 1987 (1987-03-05) figure 1 Patent family members are listed in annex. Further documents are listed in the continuation of box C. Special categories of cited documents: *T* tater document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "E" earlier document but published on or after the international document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) document of particular relevance; the claimed invention. cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. O document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of mailing of the international search report Date of the actual completion of the international search 25/06/2004 16 June 2004 Authorized officer Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 Salentiny, G

2

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/003308

Category •	Citation of document, with indication, where appropriate, of the relevant	passages	 Relevant to claim No.
A	US 6 496 745 B1 (KILLIAN JOHN S) 17 December 2002 (2002-12-17) figure 2B	6	
A	US 6 378 805 B1 (FILSEGGER HERMANN 30 April 2002 (2002-04-30) column 4, line 23-28; figures	ET AL)	5,6
\	EP 1 245 317 A (JOBS SPA) 2 October 2002 (2002-10-02) the whole document		10-13
١	DE 36 32 288 A (BAYMAK FARUK) 7 April 1988 (1988-04-07) the whole document		10-13
		·	
	· · · · ·		

2

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/EP2004/003308

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 5518208	A	21-05-1996	NONE		
US 2001015043	A1	23-08-2001	DE CA EP	10007995 A1 2337725 A1 1127785 A2	06-09-2001 22-08-2001 29-08-2001
US 1851211	Α	29-03-1932	NONE		
DE 3531028	A	05-03-1987	DE	3531028 A1	05-03-1987
US 6496745	B1	17-12-2002	AU CA EP JP WO	6658201 A 2408779 A1 1285316 A2 2003533406 T 0188646 A1	26-11-2001 22-11-2001 26-02-2003 11-11-2003 22-11-2001
US 6378805	B1	30-04-2002	AT AT WO	405813 B 190397 A 9924316 A1 221486 T	25-11-1999 15-04-1999 20-05-1999 15-08-2002
•			AT AU CA DE	9727698 A 2309647 A1 59805041 D1	31-05-1999 20-05-1999 05-09-2002
	•	• • • • • • • • • • • • • • • • • • • •	EP ES	1030807 A1 2180206 T3	30-08-2000 01-02-2003
EP 1245317	Α .	02-10-2002	IT CN EP US	B020010180 A1 1377810 A 1245317 A1 2002148271 A1	27-09-2002 06-11-2002 02-10-2002 17-10-2002
DE 3632288	A	07-04-1988	DE CH DE WO EP GB US	3632288 A1 671000 A5 3790556 C1 8801967 A1 0282541 A1 2207345 A ,B 4993666 A	07-04-1988 31-07-1989 31-10-1996 24-03-1988 21-09-1988 01-02-1989 19-02-1991

PATENT COOPERATION TREATY

То:				PCT
see form		IWALD nwalts GmbH Juni 2004	INTERNATIO	ITEN OPINION OF THE DNAL SEARCHING AUTHOF (PCT Rule 43 <i>bis</i> .1)
		01.05 BB	Date of mailing (day/month/year)	ee form PCT/ISA/210 (second sheet)
Applicant's or agent's file see form PCT/ISA/22		AhT	FOR FURTHER See paragraph 2 be	
International application International Application International Application International Internat		International filing date (29.03.2004	day/month/year)	Priority date (day/month/year) 28.03.2003
International Patent Class B64C1/06	sification (IPC) or I	both national classification	and IPC	
Applicant AIRBUS DEUTSCH	LAND GMBH			
Box No. I Box No. II Box No. III Box No. IV Box No. V	Basis of the op Priority Non-establishm Lack of unity of Reasoned state	nent of opinion with reg finvention	ard to novelty, inven	tive step and Industrial applicability o novelty, inventive step or industrial
☐ Box No. VI	Certain docum	ents cited	•	
☐ Box No. VIII☐ Box No. VIII		s in the international appations on the internation		
2. FURTHER ACTI			4-414	
written opinion o	f the Internation coses an Author eau under Rule	al Preliminary Examinin ity other than this one to	g Authority ("IPEA") be the IPEA and th	ill usually be considered to be a However, this does not apply where e chosen IPEA has notifed the national Searching Authority
If this opinion is,	EA a written replicate of mailing	v together where appro	onriate with amendo	e IPEA, the applicant is invited to nents, before the expiration of three on of 22 months from the priority date,
months from the whichever expire	es later.			
months from the		CT/ISA/220.		
months from the whichever expire	ns, see Form PC	CT/ISA/220. Form PCT/ISA/220.		

European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465

Salentiny, G

Telephone No. +49 89 2399-8337



10/551019 JC09 Rec'd PCT/PT0 48 SEP 2005 International application No. PCT/EP2004/003308

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

	-	Box No. 1 Bas	s of the opinion				
	1.	 With regard to the language, this opinion has been established on the basis of the international application the language in which it was field, unless otherwise indicated under this item. 					
		language	has been established on the basis of a translation from the original language into the following , which is the language of a translation furnished for the purposes of international search s 12.3 and 23.1(b)).				
	2.	With regard to an necessary to the	ny nucleotide and/or amino acid sequence disclosed in the international application and claimed invention, this opinion has been established on the basis of:				
		a. type of materia	al:				
		□ a sequer	ce listing				
		□ table(s) r	elated to the sequence listing				
)		b. format of mate	erial:				
		☐ in written	format				
		☐ in compu	iter readable form				
		c. time of filing/fu	rnishing:				
		☐ containe	d in the international application as filed.				
		☐ filed toge	ether with the international application in computer readable form.				
		☐ furnished	subsequently to this Authority for the purposes of search.				
	3.	has been file copies is ide	in the case that more than one version or copy of a sequence listing and/or table relating thereto ed or furnished, the required statements that the information in the subsequent or additional entical to that in the application as filed or does not go beyond the application as filed, as were furnished.				
í	4.	. Additional comm	nents:				

	Box	No. II	Priority				- 			
1.	⊠	The following document has not been furnished:								
		×	copy of the earlier	application	n whose pr	iority has been claim	ed (Rule 43/	bis.1 and 66.7(a)).		
		☐ translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)).								
		Consec	quently it has not be leless been establi	een possib shed on the	le to conside assumpti	der the validity of the ion that the relevant	priority clain date is the cl	n. This opinion has laimed priority date		
2.		has bee	oinion has been est en found invalid (Ri ate indicated above	ules 43 <i>bis</i> .	1 and 64.1	rity had been claimed). Thus for the purpo the relevant date.	due to the to ses of this o	fact that the priority pinion, the internat	claim ional	
3.	Add	Additional observations, if necessary:								
			,							
	indu		Reasoned state applicability; citation	ment und lons and e	er Rule 43 explanatio	bis.1(a)(i) with regains supporting such	ard to novel statement	ty, inventive step	or	
1.	Stat	ement								
	Nov	elty (N)		Yes:	Claims	3-6,10-13	-	•	•	
		• • •		· No:	Claims	1,2,7,8,9				
	Inve	entive st	en (IS)	Yes:	Claims	13				
			· · · · · · · · · · · · · · · · · · ·	No:	Claims	3,4,5,6,10,11,12			* *.	
	Indu	ıstrial aı	oplicability (IA)	Yes:	Claims	1-13				

No: Claims

see separate sheet

Re Item V

()

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

D1: US-A-5 518 208 (Lawrence E. Roseburg, 21 May 1996)

D2: US-A-2000/015043 (Walter Zink et al., 23 August 2001)

D3: DE-A-35 31 028 (Alexander-Jacobus Maria van der Velden, 5 March 1987)

D4: US-B-6 496 745 (John S. Killian, 17 December 2002)

D5: US-B-6 378 805 (Walter Stephan et al., 30 April 2002)

D6: EP-A-1 245 317 (Jobs S.p.A., 2 October 2002)

1.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

The document **D1** discloses (the references in parentheses applying to this document):

- a frame member (Figure 3, item 40)
- the frame member comprises a clip region (Figure 1, item 64) and a frame region (item 47)
- the clip region and the frame region are integral (figures)
- 1.2 Claim 2 also lacks novelty in the sens of Article 33(2) PCT as the figures of D1 disclose a plurality of clip regions (e.g. figure 6, item 64) and the frame member is formed as one piece (figures 2 and 3).
- 1.3 Using the extrusion moulding for forming frame members is a common practice in the art (e.g. D2, page 4, paragraph 0036, line 1-2). Using this known technique for the frame member is therefore not looked upon as involving an inventive step in the sense of Article 33(3) PCT. It merely reflects a technology which the skilled man would take into consideration when faced with the manufacturing problem of the frame. The same applies to the milling process of claim 4 which is also disclosed in D2 (page 4, paragraph 0036, line 3-6).

()

- 1.4 The additional features of claim 5 merely reflect a frame design option which is known in the art (e.g. D3, figure 1). This is a design possibility known to the skilled person and he would adopt it according to the installation circumstances without having to exert any inventive skills in the sense of article 33(3) PCT.
- 1.5 Cutouts in a structural part are generally known for increasing the stress level in the vicinity of the cutout which may lead to the development of cracks in the structure. This is part of the basic knowledge known to any engineer working in structural design, regardless of the material used. Reinforced cutouts can for example be seen from D4 (figure 2B) and D5 (column 4, line 23-28). Modern CNC milling techniques are furthermore commonly used nowadays (see for example D6, paragraph 0009) and a local reinforcement can easily be achieved therewith. The additional subject-matter of claim 6 is therefore not considered to be the result of an inventive activity in the sense of Article 33(3) PCT.
- 1.6 The clip region of D1 is connected to the skin of an aircraft (item 44) and the subject-matter of claims 7 9 thus fail in meeting the novelty requirements of Article 33(2) PCT.
- 1.7 The versatility of CNC milling techniques is well known in the art (e.g. D6). No inventive activity can be attributed to the simple use of a technique which is known per se to a structural part which is known as well (from D1). The subject-matter of claim 10 is therefore not considered to be the result of an inventive activity according to Article 33(3) PCT. The same applies to the additional feature of claim 11. Extrusion moulding is known to be a technique for manufacturing the workpiece prior to detail machining (D2). It is furthermore also known to use a mould which fits the dimensions of the structural part to be manufactured. Claims 11 and 12 are therefore also not considered to fulfill the requirements of Article 33(3) PCT.
- 1.8 The manufacturing method disclosed in claim 13 is considered to fulfill the requirements for novelty, inventive activity and industrial applicability of the PCT. The bending of the mould by a stretch forming process followed by a milling of the bended mould is not known or rendered obvious by the documents at hand.